Mathematics Progression Points: Foundation (Prep) – v8.0

Independent Schools Queensland (ISQ) has developed this version of the Progression Points to support teachers in independent schools with implementation of version 8 of the Australian Curriculum. This work has been done with support from officers at ACARA.

Teachers of Prep to Year 2 will find significant changes in English from previous versions of the Australian Curriculum – particularly with the inclusion of more specific references to phonics and phonemic awareness. Changes to the curriculum have also been made in all other year levels in both English and mathematics.

A word document version of the Progression Points is available so that teachers can rearrange the sequences of learning.

Personnel in independent schools are encouraged to consider how the Progression Points could be used to:-

* diagnose through formative assessment, the capabilities, strengths and weaknesses of individual students
* plan teaching programs to meet the needs of individuals and groups of students
* formally assess the progress of individuals and groups of students
* report to parents on the achievements of their children against the Australian Curriculum.

As with previous versions of the Progression Points, the “demonstrating” column accurately reflects the expectations of version 8 of the Australian Curriculum achievement standards – however with more detail and examples included.

ISQ welcomes any suggestions for improvement from teachers working very closely with the Progression Points.

More information

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| **Foundation Year Achievement Standard**  By the end of the Foundation year, students make connections between number names, numerals and quantities up to 10. (MKU0.1) They [compare](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Compare) objects using mass, length and capacity. (MKU0.2) Students connect events and the days of the week. (MKU0.3) They [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) the order and duration of events. (MKU0.4) They use appropriate language to [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) location. (MKU0.5)  Students count to and from 20 and order small collections. (MS0.1) They group objects based on common characteristics and sort shapes and objects. (MS0.2) Students answer simple questions to collect information and make simple inferences. (MS0.3) | | | | | |
| **Strand** | **Emerging** | **Developing** | **Demonstrating** | **Advancing** | **Extending** |
| **Strands and content descriptions for teaching** | Beginning to work towards the achievement standard | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| * *With explicit prompts (step-by-step oral scaffolding, concrete materials, reference to charts, etc)* * *In familiar contexts* * *Learning to follow procedures* | * *With prompts (oral or written questions, concrete materials, reference to charts, etc)* * *In familiar contexts* * *Attempts to explain* | * *Independent (with access to concrete materials, charts, etc)* * *In familiar contexts* * *Explains basic understanding* | * *Independent (with access to concrete materials, charts, etc)* * *Applying in familiar contexts* * *Explains with detail* | * *Independent (with access to concrete materials, charts, etc)* * *Applying in new contexts* * *Explains with connections outside the teaching context* |
| Proficiency strands  *At this level:* | * Understanding *includes connecting names, numerals and quantities* * Fluency *includes counting numbers in sequences readily, continuing patterns, and comparing the lengths of objects directly* * Problem Solving *includes using materials to model authentic problems, sorting objects, using familiar counting sequences to solve unfamiliar problems, and discussing the reasonableness of the answer* * Reasoning *includes explaining comparisons of quantities, creating patterns, and explaining processes for indirect comparison of length.* | | | | |
| **Relevant part of the Achievement Standard** | * **Students make connections between number names, numerals and quantities up to 10. (MKU0.1)** * **Students count to and from 20 and order small collections. (MS0.1)** | | | | |
| **Number and Algebra:**   * Number and place value   [***ACMNA001***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA001)  1 | **With explicit prompts**, students **count**:   * **forwards from 1 to** 10 * **backwards** from 10 to 1 * in practical situations. | **With prompts**, students **count:**   * **forwards from 0 to 20** * **backwards** from 20 to 0 * in practical situations * **in stories and rhymes.** | Students **independently** count:   * to and from 20 * **from any starting point** * in practical situations. | Students count **fluently**:   * to and from numbers **beyond 20** * from any starting point * **apply this knowledge independently** in everyday situations. | Students:   * **identify patterns** in their counting * **to and from any number up to 100.** |
| **Number and Algebra:**   * Number and place value   [***ACMNA002***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA002)  2 | **With explicit prompts**, they:   * **count quantities** up to 10 * **match a few numerals** with the number name. | They:   * **accurately match most** **numerals** with number names to 10 * **with prompts** match –   + number names   + numerals   + quantities **up to 10.** | They **independently**:   * make connections between-   + number names   + numerals   + quantities **up to 10**   (e.g. compare quantities to identify which group has more or less things in it; match numeral to groups). | They:   * connect number names, numerals and quantities, **including zero, beyond 10** (e.g. when marking off the days in a month on a calendar; when marking the roll and referring to the number of children present). | They:   * connect number names, numerals and quantities **beyond 20** * **identify and describe patterns** in the way numerals are written * **compare larger quantities** (e.g. 26 is more than 19; 12 is less than 21). |
| **Number and Algebra:**   * Number and place value   [***ACMNA003***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA003)  [***ACMNA289***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA289)  3 | **With explicit prompts**, they:   * **order two small collections** of like items **to 10** (e.g. 3 buttons and 6 buttons) * **subitise groups of** **3** or less.. (Subitise: recognise the number without counting) | **With prompts**, they:   * order small collections (e.g. 3 collections of objects, with **up to 15** objects in a collection) * **subitise groups of 4** or less * **attempt to explain** their ordering | They **independently**:   * order small collections (e.g. 3 collections of objects, with **up to 20** objects in a collection) * **subitise groups of 5** or less * **explain** their ordering. | They:   * compare, order and describe collections of items of **like and unlike characteristics beyond 20** * **use ordinal number words (**first, second, third) * clearly explain their ordering **with details**. | They:   * **independently use their ability** to compare, order and describe collections of items beyond 20 **in everyday situations** * use ordinal number words * **explain their reasoning** and decisions in detail. |
| **Number and Algebra:**   * Number and place value   [***ACMNA004***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA004)  [***ACMNA289***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA289)  *Not identified in the Foundation Achievement Standards*  4 | ***With explicit prompts****, they:*   * ***engage in practical situations*** *involving addition or subtraction in everyday situations (e.g. giving away items from a collection).* | ***With prompts****, they:*   * ***represent practical situations*** *involving addition or subtraction (e.g. giving away items from a collection) in everyday situations* * ***attempt*** *to describe what they have done.* | *They* ***independently****:*   * ***represent practical situations*** *involving addition or subtraction* * ***describe*** *what they have done.* | *They:*   * ***work out*** *simple addition and subtraction problems in real-life situations* * ***explain their reasoning****.* | *They:*   * ***solve unfamiliar*** *addition and subtraction problems* * *talk about their reasoning and the* ***reasonableness of their answers****.* |
| **Relevant part of the Achievement Standard** | * **They group objects based on common characteristics and sort shapes and objects. (MS0.2)** | | | | |
| **Number and Algebra:**   * Patterns and algebra   [***ACMNA005***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA005)  8 | **With explicit prompts**, they:   * group familiar objects based on **one common characteristic** * **identify the characteristic** to be used for grouping * ***copy*** *patterns with objects and drawings.* | **With prompts**, they:   * group familiar objects based on **one or two common characteristic** * **attempt to explain** the basis for their groupings * *copy and* ***continue*** *patterns with objects and drawings.* | They **independently**:   * group objects based on **(two)** common characteristics * **provide a basic explanation** of the basis for their groupings * *copy, continue and* ***create*** *patterns with objects and drawings.* | They:   * sort and classify familiar objects by **two or more less common characteristics** (e.g. texture, use, family) * give detailed explanations of the basis for these classifications. * *copy, continue and create patterns with objects, drawings,* ***sounds and movement.*** | They:   * **use their ability** to sort and classify familiar objects in practical situations * **explain their reasoning with detail** * ***identify and explain patterns.*** |
| **Relevant part of the Achievement Standard** | * **They compare objects using mass, length and capacity. (MKU0.2)** * **Students connect events and the days of the week. (MKU0.3)** * **They explain the order and duration of events. (MKU0.4)** | | | | |
| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG006***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG006)  9 | **With explicit prompts**, they:   * **compare two objects** using-   + **length** (which is shorter)   + **capacity** (which holds more) * measure **directly** * **respond to questions** using everyday language. | **With prompts**, they:   * compare two objects using-   + **mass** (which is heavier)   + length (which is shorter)   + capacity (which holds more) * **measure** directly and **indirectly when given materials** * **attempt to explain** in everyday language. | They **independently**:   * compare (**two or three**) objects using –   + mass   + length   + capacity * measure directly and indirectly when **given a choice of materials** * **explain their reasoning** in everyday language. | They:   * compare (**three or more)** objects using –   + mass   + length   + capacity * **suggest appropriate items** to measure the length of an object or to decide which holds more or is heavier * **explain their choices**. | They:   * use their ability to measure and compare to **solve real-life problems** involving -   + mass   + length   + capacity * **explain the processes they used and their reasoning**. |

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| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG007***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG007)  10 | **With explicit prompts**, they:   * explain the usual **order of significant events** in a day (e.g. In the morning I get up. I have breakfast. I put on my uniform and go to school. After school I play. I have tea and go to bed.) | **With prompts**, they:   * explain the **usual order** of events in a day (e.g. In the morning I get up. I wash my face and get dressed. Then I have breakfast. Mummy does my hair before I go to school. etc.) | They **independently**:   * explain the order of events in a day (including a school day) * **explain the duration** of events using everyday language (e.g. I sleep for a long time at night. I’m fast getting dressed.) | They:   * **refer to a clock** and **use the term *o’clock*** when explaining the order and duration of events through the day. * **compare the duration of events** in their daily routine. | They:   * **suggest possible times for new events** with reference to their daily routine and the possible duration of the event * **explain** their reasoning. |
| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG008***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG008)  11 | **With explicit prompts**, they:   * connect **personally significant** events and the days of the week. | **With prompts**, they:   * **connect significant family and school events** and the days of the week. | They **independently**:   * connect **events** and the days of the week. | They:   * **describe their weekly routine** with reference to the days of the week. | They:   * **suggest possible days for new events** with reference to their weekly routine * **explain** their reasoning. |
| **Relevant part of the Achievement Standard** | * **They group objects based on common characteristics and sort shapes and objects. (MS0.2)** | | | | |
| **Measurement and Geometry:**   * Shape   [***ACMMG009***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG009)  12 | **With explicit prompts**, they:   * **sort shapes** (familiar two-dimensional shapes – squares, circles, triangles, rectangles) * **name two-dimensional shapes**. | **With prompts**, they:   * sort shapes (familiar two-dimensional shapes) * name two-dimensional shapes * **sort objects** with familiar three-dimensional shapes (spheres, cubes, cones) * **attempt to provide a basic explanation** of their sorting. | They **independently**:   * sort shapes (familiar two-dimensional shapes) * name two-dimensional shapes * sort objects with familiar three-dimensional shapes * **provide a basic explanation** of their sorting. | They   * sort shapes and objects (familiar two- and three-dimensional shapes) * **name** two-dimensional shapes and the shapes of **three-dimensional objects** * **describe and compare** two-dimensional shapes and the shapes of three-dimensional objects * provide a **detailed explanation** of their reasoning. | They:   * **identify and compare** familiar two-dimensional shapes and three-dimensional objects that are **part of complex structures** in their environment * explain their reasoning in detail. |
| **Relevant part of the Achievement Standard** | * **They use appropriate language to describe location. (MKU0.5)** | | | | |
| **Measurement and Geometry:**   * Location and transformation   [***ACMMG010***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG010)  13 | **With explicit prompts**, they:   * **follow directions** that use the everyday language of location (e.g. using prepositions such as *in, on, under*). | **With prompts,** they:   * use appropriate language to **describe the location** of objects **in familiar environments** (e.g. using prepositions such as *between, beside, on top of*). | They **independently**:   * **use appropriate language to describe location** (e.g. using prepositions to describe the location of people and objects in barrier games). | They:   * **give simple directions** to get from one location to another using everyday vocabulary (e.g. You go through the door, along the verandah, down the steps and along the pathway past the seats to get to the library). | They:   * give simple directions to get from one location to another using everyday vocabulary * **evaluate the accuracy of their directions**. |

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| **Relevant part of the Achievement Standard** | * **Students answer simple questions to collect information and make simple inferences. (MS0.3)** | | | | |
| **Statistics and probability:**   * Data representation and interpretation   [***ACMSP011***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP011)  15 | **With explicit prompts** they:   * **answer yes/no questions** to collect information   . | **With prompts**, they:   * **answer simple questions** to collect information * **attempt to explain** what they have done.   . | They **independently**:   * **pose** and answer **simple questions** to investigate about themselves, and familiar objects and events * **provide a basic explanation** of what they have done. | They:   * **represent responses** to questions using **simple displays** * provide a **detailed explanation** of what they have done. | They:   * **use data displays to answer simple questions** such as “How many children in our class like pizza?” * **explain the data display** and their reasoning in detail. |
| **~~Relevant part of the Achievement Standard~~** | * *Not identified in Foundation Year Content Descriptions or Achievement Standards – v8.0* | | | | |
| **Number and Algebra:**   * Money and financial mathematics   *7* | ***With explicit prompts****, they:*   * ***use representations*** *of money as a means of exchange in their play* * ***do not consider the value*** *of the representations.* | ***With prompts****, they:*   * ***make representations*** *of money to use as a means of exchange in their play (e.g. paying for a plane ticket)* * ***do not necessarily consider*** *the value of their representations.* | They **independently**:   * *use representations of money as a means of exchange* * ***consider the value*** *of the representations..* | *They:*   * ***confidently identify when they would use money*** *in real-life situations* * ***explain why*** *they are using representations of money in their play.* | *They:*   * ***connect prices with goods*** *they buy* * ***compare*** *the costs of items* * ***explain*** *their use of money in their play,* ***making connections with their family and community experiences.*** |